WHAT IS CLAIMED IS:

1. A block error compensating apparatus comprising:

a video codec decoder for decoding an inputted image frame and outputting a decoded image frame; and

an error concealment block for detecting an error-generated block in the decoded image frame, compensating the detected error block through a median filter, and outputting a compensated image frame.

2. The apparatus of claim 1, wherein the error concealment block comprises:

an error detection block for detecting an error-generated block in the inputted image frame;

an error refinement block for confirming whether the detected block is an error block based on a pixel value of the detected block and pixel values of blocks adjacent to the detected block;

an error correction filter for compensating the confirmed error block through a median filter to create a compensated block; and

a frame generation block for restoring an image frame including the compensated block.

3. The apparatus of claim 2, wherein the error refinement block confirms whether the detected block is an error block by averaging pixel values of blocks adjacent to the detected error block to obtain an average value, obtaining an absolute value for a

difference between the average value and a pixel value of the detected error block, and comparing the absolute value with a predetermined value.

4. The apparatus of claim 3, wherein the error refinement block determines the detected error block as the error block when the absolute value is greater than the predetermined value, and determines the detected error block as a block having no error when the absolute value is less than the predetermined value.

5. The apparatus of claim 4, wherein the error refinement block outputs the error block to the error correction filter, and outputs the block having no error to the frame generation block.

6. The apparatus of claim 2, wherein the error correction filter averages pixel values of blocks adjacent to the detected error block through the median filter to obtain an average value, and compensates a pixel value of the detected block by the average value.

7. A block error compensating method of an image frame comprising:

decoding an inputted image frame and outputting a decoded image frame; and

detecting a block error of the decoded image frame, compensating the detected block error through a median filter, and outputting a compensated image frame.

8. The method of claim 7, wherein compensating comprises:

detecting an error-generated block in the inputted image frame;

confirming whether the detected error-generated block is an error block based on a pixel value of the detected error-generated block and pixel values of blocks adjacent to the detected error-generated block;

compensating an error of the error block through a median filter to obtain a compensated block; and

restoring an image frame including the compensated block.

9. The method of claim 8, wherein confirming is achieved by averaging pixel values of blocks adjacent to the detected block to obtain an average value, obtaining an absolute value for a difference between the average value and a pixel value of the detected block, and comparing the absolute value with a predetermined value.

10. The method of claim 9, wherein confirming is achieved by determining the detected block as an error block when the absolute value is greater than the predetermined value, and by determining the detected block as a block having no error when the absolute value is less than the predetermined value.

11. The method of claim 9, wherein the average value, $P_s(x, y)$, is given by

$$P_S(x,y) = [P(x-1,y-1)+P(x,y-1)+P(x+1,y-1)]/3 + [P(x-1,y)+P(x+1,y)]/2$$
$$+[P(x-1,y+1)+P(x,y+1)+P(x+1,y+1)]/3$$

wherein P(x,y) denotes a pixel value of the detected error block.

12. The method of claim 7, wherein compensating is achieved by averaging pixel values of blocks adjacent to the detected block through a median filter to obtain an average value, and compensating a pixel value of the detected block by the average value.

13. The method of claim 11, wherein the average value, $P_{gen}(x, y)$, is given by:

$$P_{gen}(x,y) = [P(x,y-1) + P(x,y-3) + P(x+1,y-2) + P(x-1,y-2) + P(x,y+1)$$

$$+ P(x,y+3) + P(x+1,y+2)] / 7$$

wherein P(x, y) denotes a pixel value of the detected error block.

14. A system to process moving image data, comprising:

an error detection member to detect a block having an error in a decoded image frame;

an error refinement member to determine whether the block detected by the error detection member is one of an error block and an error-free block;

an error correction filter to compensate the error block using a median filter to form a compensated block, the error-free block to bypass the error correction filter; and

a frame generation member to restore the decoded image frame from one of the compensated block and the error-free block.

15. The system of claim 14, wherein processing of the moving image data occurs in real time.

16. The system of claim 14, wherein processing of the moving image data occurs without re-receiving the decoded image frame to compensate the error block.

17. The system of claim 14, wherein processing of the moving image data occurs without performing a motion estimation process and a motion compensation process for image frames adjacent to the decoded image frame to compensate the error block.

18. The system of claim 14, wherein the decoded image frame comprises one of an I-Frame and a P-Frame.

19. The system of claim 14, further comprising a codec decoder to output the decoded image frame.

20. The system of claim 14, further comprising a window interface to convert the restored image frame.